



NOMBRE \_\_\_\_\_ CURSO \_\_\_\_\_

**TEMA 4. APARATO CIRCULATORIO Y EXCRETOR.VOCABULARIO**  
**De cada palabra escribe su definición, un ejemplo si te lo pido y su traducción al inglés.**

- a) Homeostasis
  
  
  
  
  
- b) Hemoglobina
  
  
  
  
  
- c) Miocardio
  
  
  
  
  
- d) Aurícula. Ejemplo
  
  
  
  
  
- e) Ventrículo. Ejemplo
  
  
  
  
  
- f) Sístole. Ejemplo
  
  
  
  
  
- g) Diástole. Ejemplo
  
  
  
  
  
- h) Linfa. Ejemplo
  
  
  
  
  
- i) Urea. Ejemplo
  
  
  
  
  
- j) Nefrona. Ejemplo

## THE CIRCULATORY AND EXCRETORY SYSTEMS.

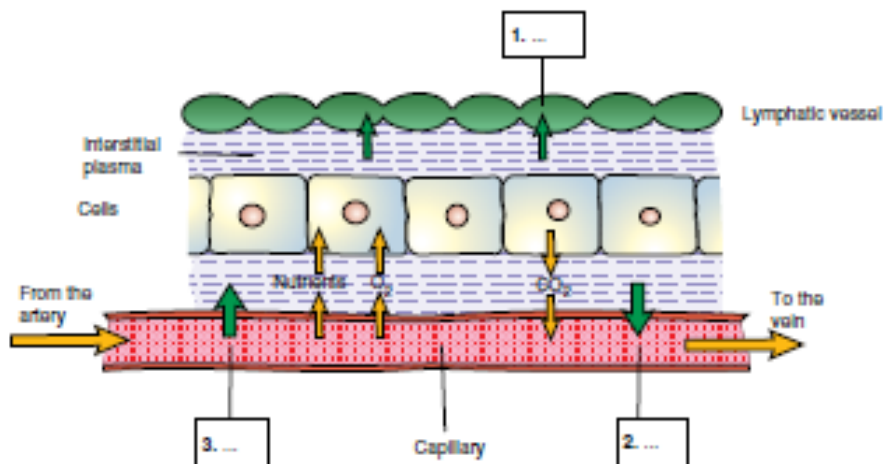
Here you have 5 key words of this Unit. You have to study them. If you include more definition, 4 at least, in your notebook, you will have extra points in your notebook marks.

1. **Heart:** Organ in the chest which pumps blood to the rest of the body
2. **Clot:** thick mass of blood and proteins that plugs a broken blood vessel.
3. **Atrium:** Upper chamber in each side of the heart (right and left).
4. **Urea:** Waste product from the breakdown of proteins
5. **Urine:** Pale yellow fluid produced by the kidneys and excreted from the body

1. blood	2. Lymph	3. Blood Vessel
4. Artery	5. Vein	6. Capillary
7. Heart	8. Atrium	9. Ventricle
10. Red blood cells	11. Pump	12. Platelets
13. chamber	14. Myocardial infarction	15. clot
16. Sweat Glands	17. Remove	18. Calculi
19. Renal colic	20. Urine	21. Kidney

Activity 1. Place the following letters in the drawing.

- a) Blood plasma is filtered outside the capillary.
- b) Interstitial plasma enters the lymphatic vessel.
- c) The interstitial plasma enters the capillary.



## Circulatory System Notes

The main components of the circulatory system are the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

Together these components \_\_\_\_\_ blood through out the body.

### **Blood**

Blood is a \_\_\_\_\_, or sticky, fluid which flows inside the vessels of the circulatory system. There is approximately \_\_\_\_\_ of blood in the human body.

Blood is made up of \_\_\_\_\_.

Within the blood plasma there are 3 types of cells \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

Red blood cells are the most \_\_\_\_\_ type of blood cell.

They are \_\_\_\_\_, have no nucleus and contain \_\_\_\_\_, the pigment that makes blood red and also \_\_\_\_\_ oxygen.

There are fewer \_\_\_\_\_ blood cells than \_\_\_\_\_ blood cells in the body.

White blood cells help \_\_\_\_\_ the body from \_\_\_\_\_, and eliminate cell debris. There are also \_\_\_\_\_ different types.

\_\_\_\_\_ are made up of cell fragments. These cell fragments contain substances that allow the blood to \_\_\_\_\_.

The \_\_\_\_\_ of the red blood cells contain different \_\_\_\_\_. These proteins are responsible for creating the different blood types. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

### **Blood Vessels**

Blood vessels allow for blood to \_\_\_\_\_ through out the \_\_\_\_\_.

There are \_\_\_\_\_ types of blood vessels. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_ carry blood away from the heart. The largest arteries are \_\_\_\_\_.

As arteries get \_\_\_\_\_ from the heart they get \_\_\_\_\_, these are called \_\_\_\_\_.

Capillaries are \_\_\_\_\_ blood vessels that are found in every \_\_\_\_\_. There are several \_\_\_\_\_ capillaries found in the circulatory system.

When \_\_\_\_\_ come together they form \_\_\_\_\_.

Veins are responsible for \_\_\_\_\_ blood \_\_\_\_\_ to the heart. Within veins there are \_\_\_\_\_ that allow blood to \_\_\_\_\_ to the heart, but not in the \_\_\_\_\_ direction.

### The Heart

The \_\_\_\_\_ is divided into \_\_\_\_\_ chambers: two \_\_\_\_\_ and two \_\_\_\_\_.

Veins \_\_\_\_\_ the atria while arteries \_\_\_\_\_ from the ventricles.

Also, there is an \_\_\_\_\_, which allows blood to flow in one direction.

The \_\_\_\_\_ is the movement of the heart which \_\_\_\_\_ blood.

It is made up of three phases, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

### Cardiac Cycle

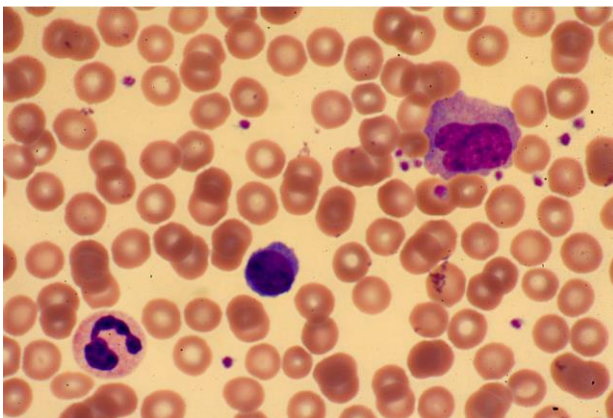
1) \_\_\_\_\_ occurs when: the atria \_\_\_\_\_, blood is \_\_\_\_\_ through the ventricles, blood \_\_\_\_\_ through the \_\_\_\_\_ antioventricular valves.

2) \_\_\_\_\_ occurs when: the ventricles \_\_\_\_\_, Sigmoid valves \_\_\_\_\_, blood flows out into the \_\_\_\_\_ and \_\_\_\_\_. At the same time, valves in ventricles and aorta \_\_\_\_\_.

3) \_\_\_\_\_ occurs when: the heart \_\_\_\_\_, blood is \_\_\_\_\_ from the venae cavae and pulmonary veins, then the blood \_\_\_\_\_ into the \_\_\_\_\_.

### **QUESTIONS:**

1) Identify the three types of blood cells in the following photomicrograph.



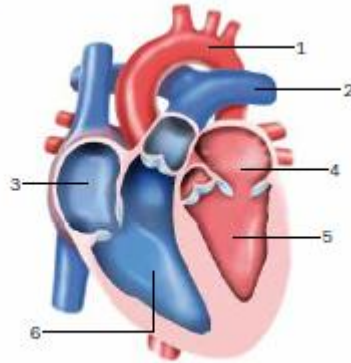
2) How many blood types are there? What are they called? Do you know your blood type?

3) Arteries carry blood ..... the heart. Veins carry blood .....the heart.

4) Why do girls after puberty need to eat more food with iron in?

5) Why is the Circulatory System an important system within our bodies?

Complete the following diagram that shows the structure of the heart, with the words in the words below.



**Left atrium/ Aorta /Vena cava/ /Pulmonary artery/Right ventricle/ Pulmonary veins /Left ventricle/ Right atrium**

6) Knowing that each day we expel approximately 1.5 litres of urine:

a) What quantity of urine is produced per minute?

b) The maximum quantity of urine that the bladder can retain is 700 cm<sup>3</sup>. Knowing that when the bladder contains 300 cm<sup>3</sup> we feel the urge to urinate, how many times will we have to urinate a day?

B The pulse is determined by the cardiac rhythm, i.e. the rate at which the heart pumps blood around the arteries. We can measure it by lightly pressing our ring, middle or index fingers down on an artery near the surface.

The number of pulses per minute varies from person to person:

- In children under the age of one year, it is between 130-140 pulses per minute.
- In children, between 80-100.
- In adults, between 70-80.
- In old people, 60 or less.

a) Take the pulse of two classmates at different times (at rest, after walking for a minute, after jumping for a minute, at rest again). Write the data you obtained in the table, then convert it into a bar chart beside.

	PULSE
At rest	
After walking for 1 minute	
After jumping for 1 minute	
At rest again	

